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Determination of antigen Candida albicans with amperometric enzyme immunosensor

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Abstract

Determination new variant enzyme imniunoassay with amperometric enzyme immunosensor, including the immobilizing enzyme-choline esterase and antibodies against Candida albicans (CA) in biosensitivity part of sensor, for diagnose desease of CA. The method for determination of CA based on combination immunochemical icactios and voltammetric indication of analytical signal was developed. Amperometric enzyme immunosensor developed has been used as detector. Differencies dilutions of antibody (Ab) against antigen (Ag) of CA immobilyzing in common with choline esterase (CE). The method of immobilization developed allows to riseive the sensor with including the immobilized CE and Ab in common. The method of determination of CA based on combination the reaction of forming immune complex tAb-Agl with enzyme immunosensor for its detection. The dynamic range of concentrations determined of Ag depends on degree of dilution of Ab used for manufactury biosensitivity part of sensor. The data indicate that the [Ab-Ag] immune complexes are stable. This is also confirmed by the values of [Ab-Ag] binding constants, obtained in Scatchard coordinates. This method of determination doesn't require special preparation of a sample. Selectivity, sensitivity, simplicity and quickness are characterize of this method which could be used for manufacturing test-sistem for determination CA in blood.

Keywords

Antibody, Antigen, Cholinesterase, Enzyme immunoassay, Enzyme immunosensor